Abstract

A thermal overload and resonant motion control circuit is provided for an audio speaker, the circuit generating a feedback signal to control the input applied to the speaker, which feedback signal is dependent on both the drive current to the speaker and the speaker impedance. More specifically, the feedback signal has a voltage which is substantially equally to the absolute value of K(bv-ai)H(s); where,

K = a gain for the circuit,

i = current of drive signal applied to the speaker,

v = voltages of drive signal,

a = percentage of drive current (i) sensed by the control circuit;

b = percentage of drive voltage (v) sensed by the control circuit,

H(s) = a lowpass filter transfer function for a lowpass filter of the control circuit, and

s = a complex frequency variable.